

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 84632-US1									
	Application Number 10/693,845-Conf. #2813	Filed October 20, 2003									
	First Named Inventor Karen Swider Lyons et al.										
	Art Unit 1745	Examiner T. M. Dove									
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <table><tbody><tr><td><input type="checkbox"/> applicant /inventor.</td><td>_____ /Joseph T. Grunkemeyer/ Signature</td></tr><tr><td><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</td><td>_____ Joseph T. Grunkemeyer Typed or printed name</td></tr><tr><td><input checked="" type="checkbox"/> attorney or agent of record. Registration number 46,746</td><td>_____ (202) 404-1556 Telephone number</td></tr><tr><td><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____</td><td>_____ December 11, 2008 Date</td></tr></tbody></table> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p> <p><input type="checkbox"/> *Total of 1 forms are submitted.</p>				<input type="checkbox"/> applicant /inventor.	_____ /Joseph T. Grunkemeyer/ Signature	<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	_____ Joseph T. Grunkemeyer Typed or printed name	<input checked="" type="checkbox"/> attorney or agent of record. Registration number 46,746	_____ (202) 404-1556 Telephone number	<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____	_____ December 11, 2008 Date
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of: Lyons et al.

Serial No.: 10/693,845

Filed: 10/20/2003

For: PLATINUM-IMPREGNATED HYDROUS TIN OXIDE CATALYSTS

Examiner: Dove, Tracy Mae

Art Group Unit: 1745

Honorable Commissioner of Patents

PO Box 1450

Alexandria, VA 22313-1450

December 11, 2008

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

This Request is in response to the Final Rejection of 06/12/2008. It is submitted with a notice of appeal and a petition for extension.

Claims 1-18 are pending in the application. No claims are presently allowed.

Claim Rejections – 35 U.S.C. § 102

Claims 1, 2, 4, 10-12, 17, and 18 have been rejected under 35 U.S.C § 102(b) as allegedly anticipated by Watanabe et al. (*J. Electrochem. Soc.*).

In order to make a *prima facie* case of anticipation, the reference must disclose each limitation of the claim. *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053, 814 F.2d 628, 631 (Fed. Cir. 1987); MPEP 2131. Among other deficiencies, the reference does not disclose the limitation in claims 1 (2, 4, and 10 dependent thereon), 11 (12 dependent thereon), and 17 (18 dependent thereon) that the composition comprises a hydrate. Watanabe discloses platinum dispersed in tin oxide. No hydrate ($\cdot yH_2O$) form of tin oxide is disclosed. Although it is stated that “alkaline pretreatment of SnO_2 causes the pH response of the electrode to be enhanced, evidently though a superficial hydration,” (p. 60, col. 1, lines 36-39) hydration is defined in Watanabe as formation of $-Sn-OH$ (p. 60, col. 1, lines 39-40). This is not the same as $SnO_x \cdot yH_2O$. As all the claim limitations have not been disclosed, a *prima facie* case of

anticipation has not been made.

In response to the above argument, the rejection cites a definition of hydration which precludes the splitting of the H–OH bond, and concluding that the formula stated in Watanabe, –Sn–OH, could have been written as $\text{SnO}_x \cdot y\text{H}_2\text{O}$. However, Watanabe teaches hydrolysis of Sn=O bonds. Even if the reference uses the terms hydration and hydrolysis inconsistently, the clause at p. 60, col. 1, lines 39-40 clearly states that a tin-oxygen double bond is converted to a tin-oxygen single bond, the oxygen becoming part of a hydroxyl group. The oxygen atom begins and ends this reaction bonded to the tin atom, without the addition of a whole water molecule. Watanabe is not using the term “hydration” in the sense used in the rejection. The same paragraph of the reference goes on to explain that surface Sn–OH protons maybe replaced by Fe(III) or Pb(II). If the interpretation in the rejection of Sn–OH were correct, the result of this replacement would be, for example, $\text{SnO}_x \cdot y(\text{FeHO})^{+2}$. This is not a plausible result.

Claims 1, 2, 4, 5, 12, 13, 15, and 17 have been rejected under 35 U.S.C § 102(b) as allegedly anticipated by Gardner et al. (*J. Phys. Chem.*).

As in Watanabe, Gardner does not disclose a hydrate as recited in claims 1 (2, 4, and 5 dependent thereon), 11 (12 and 13 dependent thereon) 15, and 17. Although dehydration of the material is disclosed, this does not imply that the material had been a hydrate. Gardner discloses “surface dehydration caused by the combination of surface hydroxyl groups and desorption of water” (p. 835, col. 1, lines 27-28). The water is made from hydroxyl groups, not hydrate groups. There is no disclosure that there was ever a hydrate group present. The rejection stated that “Pt/SnO₂ is humidified.” Humidification would indicate merely that water molecules are present. This does not show the chemical reaction needed to form the presently claimed hydrate compound. As all the claim limitations have not been disclosed, a *prima facie* case of anticipation has not been made.

In response to the above argument, the rejection cites a definition of dehydration stating that it involves removal of one or more molecules of water from a chemical compound, and concluding that the compound of Gardner was a hydrate in order to undergo dehydration. However, the cited definition gives as an example, conversion of ethanol to ethylene ($\text{CH}_3\text{--CH}_2\text{OH} \rightarrow \text{CH}_2=\text{CH}_2 + \text{H}_2\text{O}$). However, ethanol is not a hydrate of the claimed “ $\cdot y\text{H}_2\text{O}$ ” form. The definition used in the rejection does not support the proposition that the dehydrated

compound of Gardner had been a hydrate.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 2, and 4-16 have been rejected under 35 U.S.C § 103(a) as being allegedly unpatentable over Watanabe et al. (US 5,922,487, “Watanabe 487”) in view of Watanabe.

In order to make a *prima facie* case of obviousness, there must be some rationale to support the rejection (*KSR International Co. v. Teleflex Inc.*, 82 U.S.P.Q.2d 1385, 550 U.S. ____ (2007)). The rationale put forth in the rejection is based upon Watanabe teaching hydrated Pt-SnO₂. However, as explained above Watanabe does not disclose a hydrate as presently claimed. Watanabe 487 discloses only Pt/Sn alloys. No tin oxide or hydrates are disclosed. None of the references discloses the limitation in claims 1 (2 and 4-10 dependent thereon), 11 (12-14 dependent thereon), and 15 (16 dependent thereon) that the composition comprises a hydrate, and the rejection sets forth no rationale for modifying the references in this way. As there is no rationale supporting the rejection, a *prima facie* case of obviousness has not been made.

Claim 3 has been rejected under 35 U.S.C § 103(a) as being allegedly unpatentable over Watanabe in view of Katayama et al. (*J. Phys. Chem.*).

As explained above Watanabe does not disclose a hydrate as presently claimed. As stated in the rejection, Katayama discloses Pt/SnO₂, which is not the same as the claimed hydrate. None of the references discloses the limitation in claim 1 (3 dependent thereon) that the composition comprises a hydrate, and the rejection sets forth no rationale for modifying the references in this way. As there is no rationale supporting the rejection, a *prima facie* case of obviousness has not been made.

Claim 3 has been rejected under 35 U.S.C § 103(a) as being allegedly unpatentable over Gardner in view of Katayama.

As explained above Gardner does not disclose a hydrate as presently claimed. As stated in the rejection, Katayama discloses Pt/SnO₂, which is not the same as the claimed hydrate. None of the references discloses the limitation in claim 1 (3 dependent thereon) that the composition comprises a hydrate, and the rejection sets forth no rationale for modifying the

references in this way. As there is no rationale supporting the rejection, a *prima facie* case of obviousness has not been made.

In view of the foregoing, it is submitted that the application is now in condition for allowance.

In the event that a fee is required, please charge the fee to Deposit Account No. 50-0281, and in the event that there is a credit due, please credit Deposit Account No. 50-0281.

Respectfully submitted,



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